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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/408,470	09/28/1999	JEFFREY P. KUBALA	PO9-99-159	4085

46369 7590 10/18/2004

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EXAMINER	
OPIE, GEORGE L	

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/408,470	Applicant(s) Kubala et al.	
	Examiner George L. Opie	Art Unit 2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

1) X Responsive to communication(s) filed on 7 July 2004.

2a) X This action is **FINAL**. 2b) ___ This action is non-final.

3) ___ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) X Claim(s) 1-65 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ___ Claim(s) _____ is/are allowed.

6) X Claim(s) 1-65 is/are rejected.

7) ___ Claim(s) _____ is/are objected to.

8) ___ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ___ The specification is objected to by the Examiner.

10) ___ The drawing(s) filed on _____ is/are objected to by the Examiner.

11) ___ The proposed drawing correction filed on _____ is: a) ___ approved b) ___ disapproved.

12) ___ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

13)_ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

a) ___ All b) ___ Some * c) ___ None of the CERTIFIED copies of the priority documents have been:

1. ___ received.
2. ___ received in Application No. (Series Code / Serial Number) _____.
3. ___ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14) ___ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

14) ___ Notice of References Cited (PTO-892)
15) ___ Notice of Draftsperson's Patent Drawing Review (PTO-948)
16) ___ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
17) ___ Interview Summary (PTO-413) Paper No(s). _____.
18) ___ Notice of Informal Patent Application (PTO-152)
19) ___ Other:

DETAILED ACTION

This Office Action is responsive to Applicant's request for reconsideration, dated 29 June 2003.

The Office acknowledges Applicant's inclusion of an electronic copy of the amendment on a 3½inch floppy disk, and the Office would like to thank Applicant for submitting the amendment in electronic form to expedite its processing.

1. Obviousness-type double patenting rejection

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See In re Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. CIT. 1993); In re Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); In re van Ornurn, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); In re Uogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In re Thorington,418 F.2d 528, 163 USPQ 644 (CCPA 1969).

"Double patenting rejection of application claims was fully justified where applicant, in course of expanding first application to disclose enough more by way of details, alternatives, and additional uses to support broad, dominating, generic claims in later applications, has disclosed no additional invention or discovery other than that what was already claimed in patent on first application; there is significant difference between justifying broadening of claims and disclosing additional inventions." *In re Van Ornum*, 214 USPQ (CCPA 1982).

Claims 1-65 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-34 of application 09/407,212 filed September 28, 1999, now U.S. Patent 6,587,938.

Although the conflicting claims are not identical, they are not patentably distinct from each other because of corresponding language that recites many of the same elements and functions claimed in the previously patented invention, e.g., *"allocation of CPU resources to a partition of said computing environment" and "dynamically adjusting said allocation across said partition ... in response to workload goals".*

The claimed differences would be obvious to a programmer of ordinary skill because the instant claims are merely broader variations of the claims recited in the previously patented invention, e.g., **independent claim 1 of the instant application claims**:

A method of managing workload of a computing environment, said method comprising:

managing workload across two or more partitions of a plurality of partitions of said computing environment, wherein a partition has one or more central processors allocated thereto;

said managing comprising dynamically adjusting allocation of a shareable resource of at least one partition of said two or more partitions, wherein workload goals of said two or more partitions are being balanced.

as opposed to

A method of managing central processing unit (CPU) resources within a computing environment, said method comprising:
determining that an allocation
of CPU resources to a partition of said computing environment is to be adjusted; and
dynamically adjusting said allocation across said partition and another of said computing environment, wherein said dynamically adjusting is in response to workload goals of at least said partition.

as claimed in independent claim 1 of the previously patented invention.

Because the instant claims are mere variations on the limitations from the set of

elements and functions claimed in the previously patented invention, such modifications would be readily apparent to a programmer of ordinary skill.

Terminal Disclaimer

2. A timely filed terminal disclaimer in compliance with 37 C.F.R. ' 1.321(b) would overcome an actual or provisional rejection on this ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 C.F.R. ' 1.78(d).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

3. The U.S. Patents used in the art rejections below have been provided as text documents which correspond to the U.S. Patents. The relevant portions of the text documents are cited according to page and line numbers in the art rejections below. For the convenience of Applicant, the cited sections are highlighted in the *text documents*. Consistent with Office procedure, the U.S. Patents corresponding to the *text documents* are also included with this action.

4. Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-65 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Masuura (U.S. Patent 5,530,860) in view of Maeurer et al. (U.S. Patent 5,301,323).

As to claim 1, Matsuura teaches a method of managing workload of a computing environment (assigning CPU resources ... according to optional ratios, abstract) said method comprising:
managing workload across two or more partitions of said computing environment (assigning operations ... on the virtual computers, p5 3-17) wherein a partition has one or more cetral processors allocated thereto (two actual CPUs are assigned to five guest VMs ... and any actual CPUs can be assigned to any guest VMs, p12 3-34).
Masuura does not explicitly disclose the additional limitations detailed below.

Maeurer teaches dynamically adjusting allocation of a shareable resource (dynamically ... changing I/O configuration, p3 40-57) of at least one partition (channel path, p5 21-54) of said two or more partitions (channel paths by which the associated device can be accessed, p4 15-52) wherein workload goals of said two or more partitions are being balanced (manage channel paths to I/O devices ... according to ... workload goals or system performance, p3 40-57).

It would have been obvious to combine Maeurer's teachings with Masuura because the dynamic reallocation/ reconfiguration of a device with respect to channel/partitions provides a flexability for assigning resources responsive to system load conditions.

As to claim 2, Maeurer teaches the system will "automatically change the I/O configuration in accordance with changes in the workload" p3 40-57 which corresponds to the dynamically adjusting is performed transparently to work processing within said at one least one partition.

As to claim 3, it is well known that the CPU, I/O devices, network adaptors, channels or memory components commonly constitute sharable resources.

As to claim 4, Maeurer teaches "reconfiguration manipulates the channel utilizations in units ... of bandwidth ", p7 44-52 which corresponds to the moving at least a portion of said shareable resource from one partition to at least one other partition.

As to claim 5, Maeurer (p3 40-57) teaches "changing the I/O configuration . . . according to some set of priorities" which corresponds to the limitation of allocating a sharable resource based on priority.

As to claim 6, Maeurer teaches the resource (channel) "P0 is now shared by CU1 And CU4" p11 3-40, and from this it would have been obvious to provide assigning the shareable resource among two or more partitions based on percentage allocation.

As to claim 7, Maeurer (p5 21-54) teaches logical partitions as claimed.

As to claim 8, Maeurer (p3 40-57) teaches adjusting allocation of a plurality of shareable resources (measuring I/O workload and changing the I/O configuration while the system is operating).

As to claim 9, Maeurer (p4 15-32) teaches a dynamic I/O reconfiguration program (DI/OR 34) that corresponds to the workload manager for controlling the dynamic adjustment of resources in the computing environment.

As to claims 10-12, Maeurer teaches the dynamic adjusting/reconfiguring by increasing or decreasing allocation of sharable bandwidth resources, p11 3-40.

As to claim 13, note the claim 1 discussion supra. The limitations in claim 13 are the same as claim 1 but for the fact that claim 13 has an additional limitation of the partitions concurrently share at least one shareable resource. Maeurer's teaching that a resource (channel) "P0 is now shared by CU1 And CU4" p11 3-40 meets the claimed limitation of the partitions concurrently share at least one shareable resource.

As to claim 14, see the claim 3 discussion supra.

As to claim 15, see Maeurer's p3 40-57 managing/balancing via "workload goals" discussed in the rejection of claim 1 supra.

As to claims 16-17, note the discussions of claims 10-11 above.

As to claims 18-21, see the discussions of claims 4-6 and 8 respectively.

As to claims 22-33, note the rejections of claims 1-12 above. Claims 22-33 are the same as claims 1-12, except claims 22-33 are apparatus claims and claims 1-12 are method claims.

As to claims 34-42, note the rejections of claims 13-21 above. Claims 34-42 are the same as claims 13-21, except claims 34-42 are apparatus claims and claims 13-21 are method claims.

As to claims 43-44, see the rejections of claims 22 and 34 respectively. Claims 43-44 are functionally equivalent to claims 22 and 34.

As to claims 45-56, note the rejections of claims 1-12 above. Claims 45-56 are the same as claims 1-12, except claims 45-56 are computer program product claims and claims 1-12 are method claims.

As to claims 57-65, note the rejections of claims 13-21 above. Claims 57-65 are the same as claims 13-21, except claims 57-65 are computer program product claims and claims 13-21 are method claims.

6. Response to Applicant's Arguments:

Applicant asserts that the double-patenting rejection should be withdrawn, "because the instant application and the cited patent were concurrently filed". The fact of the concurrent filing, however, does not vitiate the case for the double-patenting rejection because the instant application could expire later than the patent due to circumstances under 35 U.S.C. § 154(b) that may warrant patent term extension for the instant application. See MPEP § 804.02(VI). Hence, the double-patenting rejection is properly maintained in this case.

During patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." *In re Hyatt*, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Applicant always has the opportunity to amend the claims during prosecution, and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. *In re Prater*, 415 F.2d 1393, 1404-05, 162 USPQ 541, 550-51 (CCPA 1969)

Applicant argues (claim 1) that the teachings of Matsuura and Maeurer do not meet the limitation of dynamically adjusting a resource allocable to one or more partitions. Contrary to Applicant's contention, Matsuura and Maeurer do provide resource allocation teachings that read-on the recited dynamically adjusting a sharable resource to balance workload goals of two or more partitions. Matsuura clearly describes a computer system for managing workload goals with respect to multiple partitions (virtual machines) by assigning sharable resources (CPUs) to the partitions/VMs. The Maeurer reference shows a method for dynamically adjusting resource allocation for one or more partitions. Applying the Maeurer teachings to the resource ratio allocation taught by Matsuura supplies the dynamic adjustment of resources for partitions as broadly claimed.

The scope of the claimed dynamic allocation for "two or more partitions" clearly transcends the more narrow scope that Applicant attempts to impute through argument. Claimed subject matter, not the specification is the measure of the invention. Limitations in the specification cannot be read into the claims for the purpose of avoiding the prior art, In re Self, 213 USPQ 1,5 (CCPA 1982); In re Priest, 199 USPQ 11, 15 (CCPA 1978). The claimed resource allocation for two or more partitions is clearly subject to a broad interpretation, as detailed in the rejections maintained above. The Examiner has a *duty* and *responsibility* to the public and to Applicant to interpret the claims *as broadly as reasonably possible* during prosecution. *In re Prater, 56 CCPA 1381, 415F.2d 1393, 162 USPQ 541*

See also In re Zletz, 893 F.2d 319, 321-22, 13 USPQ2d 1320, 1322 (1989) "During patent examination the pending claims must be interpreted as broadly as their terms reasonably allow.... The reason is simply that during patent prosecution when claims can be amended, ambiguities should be recognized, scope and breadth of language explored, and clarification imposed.... An essential purpose of patent examination is to fashion claims that are precise, clear, correct, and unambiguous. Only in this way can uncertainties of claim scope be removed, as much as possible, during the administrative process.".

Applicant should set forth claims in language that clearly, distinctly, unambiguously and uniquely define the invention.

In considering the dynamic allocation and management across partitions recitations, it is noted that Applicant uses terminology that has broad meaning in the art, and thus requires a broad interpretation of the claims in determining patentability of the disclosed invention. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Consequently, the dynamic resource adjustment, in the manner recited in the pending claims does not constitute a non obvious improvement over the prior art.

Applicant's arguments, filed 7 July 2004, have been fully considered but they are not deemed to be persuasive. For the reasons detailed above, the rejections set forth in the previous Office Action under ***35 U.S.C.*** § ***103*** are maintained.

The Office acknowledges Applicant's inclusion of an electronic copy of the amendment on a 3½inch floppy disk, and the Office would like to thank Applicant for submitting the amendment in electronic form to expedite its processing.

7. THIS ACTION IS MADE FINAL.

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. □ 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

8. Request for copy of Applicant's response on floppy disk:
Please help expedite the prosecution of this application by including, along with your amendment response in paper form, an electronic file copy in WordPerfect, Microsoft Word, or in ASCII text format on a 3½ inch IBM format floppy disk. Please include all pending claims along with your responsive remarks. Only the paper copy will be entered -- your floppy disk file will be considered a duplicate copy. Signatures are not required on the disk copy. The floppy disk copy is not mandatory, however, it will help expedite the processing of your application. Your cooperation is appreciated.

Contact Information:

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system.

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□ All responses sent by U.S. Mail should be mailed to:

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☐ Hand-delivered responses should be brought to Crystal Park Two, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist). All hand-delivered responses will be handled and entered by the docketing personnel. Please do not hand deliver responses directly to the Examiner.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

All OFFICIAL faxes will be handled and entered by the docketing personnel. The date of entry will correspond to the actual FAX reception date unless that date is a Saturday, Sunday, or a Federal Holiday within the District of Columbia, in which case the official date of receipt will be the next business day. The application file will be promptly forwarded to the Examiner unless the application file must be sent to another area of the Office, e.g., Finance Division for fee charging, etc.

☐ Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist at **(703) 305-9600.**

☐ Any inquiry concerning this communication or earlier communications from the examiner should be directed to George Opie at (703) 308-9120 or via e-mail at *George.Opie@uspto.gov*. Internet e-mail should not be used where sensitive data will be exchanged or where there exists a possibility that sensitive data could be identified unless there is an express waiver of the confidentiality requirements under 35 U.S.C. 122 by the Applicant. Sensitive data includes confidential information related to patent applications.

Note: Due to the PTO's move to Alexandria, the above-listed examiner's telephone number will be changed. As of 17 October 2004, Mr. Opie can be reached at (571) 272-3766.

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SUPERVISORY PATENT EXAMINER
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